# City of Nashua CQI Review



Q2 2013

**CQI** Review

## PAIN AND SUFFERING

	Patients Transported	Pain Decrease	RAPS Improvement	2 or More Pain Scales Documented	Pain Treated with Medication	Pain Treated with Procedure
AMR National Average June 2013	36858	4.4%	24.5%	10.9%	14.1%	2.8%
NH April 2013	305	4.3%	27.6%	9.2%	17.9%	1.6%
NH May 2013	281	4.6%	31.8%	7.8%	18.8%	3.1%
NH June 2013	269	4.5%	32.3%	7.8%	18.8%	5.8%

#### Comments

Reducing patient's pain and suffering is an area of focus for AMR. To that end, the above criteria have been determined as the primary measurements to demonstrate we are improving the care for patients who are experiencing discomfort. The initial goal for improving these indicators is to target documentation of two or more pain scales. Pain decreased cannot be measured without establishing a baseline pain level and a repeat level when the patient arrives at the hospital.

#### **Definitions**

Inclusion Criteria: Primary Impressions of Gastrointestinal: Nausea, Gastrointestinal: Vomiting, Neuro: Headache, Other: Headache, Other: Migraine, Includes the word "Pain"

Pain Treated with Medication: Based on percentage of patients transported with an initial pain scale greater than 0 who received one of the following: Meperdine, Ketamine, Toradol, Ketorolac, Nitrous Oxide, Vicodin, Morphine, Dilaudid, Fentanyl, Hydromorphone, Zofran, Phenergan, Reglan, Droperidol, Demerol

Pain Treated with Procedure: Based on percentage of patients transported with an initial pain scale greater than 0 who received one of the following: Heat Therapy, Ice Pack for Pain, Swelling, Trauma, Fracture, Injury, or Comfort, Splinting, Burn Care

RAPS Improvement: Rapid Acute Physiology Score; Measurement used to predict hospital mortality. Scores range from 0 – 16. Patients with a score of 16 have a 97% hospital mortality rate whereas a score of 0 has a 4% hospital mortality rate.

# **CARDIAC ARREST**

	Total	ROSC	Defibrillation PTA	First Rhythm Shockable	Median Time to Defibrillation	Documentation of EtCO2 Twice	Field Termination of Efforts
AMR National Average June 2013	4136	23.2%	11.0%	17.8%	16	47%	73.7%
NH April 2013	27	18.5%	3.7%	29.6%	21	44.4%	33.3%
NH May 2013	31	22.5%	16.1%	19.3%	16	6.4%	70.9%
NH June 2013	42	28.6%	19.1%	23.6%	9	30.9%	71.4%

#### Comments

28.6% of patients transport by AMR in NH in Cardiac Arrest has a return of spontaneous circulation on arrival at the Emergency Department, this is a steady improvement over the previous months. In addition first responder defibrillations have increased and the median time to defibrillation has decreased. All of which play a major role in improving outcomes. The primary focus of improvement here will be increasing the documentation of two or more Etco2 reading as this vital to ensuring proper advanced airway placement.

## **Definitions**

Inclusion Criteria: Emergency Calls, Patients with CARES Data Completed, Only Includes Attempted Resuscitation

**ROSC:** Percentage of Cardiac Arrest Patients with "Return of Spontaneous Circulation" upon arrival at the Emergency Department. **Defibrillation PTA:** Percentage of Cardiac Arrest Patients receiving defibrillation prior to EMS (Transporting Unit) arrival.

First Rhythm Shockable: Percentage of cardiac arrest patients with an initial rhythm of v-tach, v-fib or as determined by AED.

Median Time to Defibrillation: Median time from 911 call to defibrillation in minutes.

Documentation of EtCO2 Twice: Percentage of cardiac arrest patients with two or more EtCO2 readings documented.

Field Termination of Efforts: Percentage of cardiac arrest patients who receive a field termination of efforts.

# **VENTILATION**

	Total	Percent of Patients with Assisted Ventilations	Percent of Patients with EtCo2 Improvement	Two or More EtCo2 Readings Reported	RAPS Score Improvement	Advanced Airway Success Rate
AMR National Average June 2013	2960	1.60%	4.39	33.14%	20.97%	45.4%
NH April 2013	41	1.25%	2.70%	24.39%	26.83%	(5) 83.33%
NH May 2013	59	1.74%	0.0%	18.64%	20.34	(3) 33.33%
NH June 2013	54	1.67%	5.88%	22.22%	22.22%	(6) 100%

#### Comments

Success rates for the placement of an advanced airway for the month of June were 100%. The area of focus here will be to increase the documentation and evaluation of EtCo2 readings. EtCo2 readings are a key indicator of how the patient is responding to treatment being provided.

#### **Definitions**

Inclusion Criteria: Cardiac Arrest Excluded. Patients that require assisted ventilations

**Percent of Patients with assisted ventilations:** Percentage of total patient volume (All patient contacts) that required assisted ventilations.

**Percentage of Patients with EtCo2 Improvement:** Percentage of patients with assisted ventilation that have two or more EtCO2 readings documented whose initial reading was less than 35 or greater than 45 and whose final reading was between 35 and 45. **Two or More EtCo2 Reading Reported:** Percentage of Patients where two or more EtCo2 readings were documented.

# **RESPIRATORY**

	Total	Percent of Patients with RAPS Improvement	Percent of Patients with SPo2 Improvement	Percent of Patients with EtCo2 Improvement
AMR National Average June 2013	24,222	13.21%	34.11%	1.44%
NH April 2013	150	47.06%	29.63%	2.05%
NH May 2013	301	8.27%	4.49%	0.00%
NH June 2013	217	14.71%	40.35%	0.93%

## Comments

The data reported above is subject to the accuracy of the data entered into the patient care by the crews in the field. In order to accurately report improvements in SPo2 and EtCo2 two or more readings are required. The action item for this category will be to improve documentation and recording of repeat SPo2 and EtCo2 readings.

## **Definitions**

**Inclusion Criteria:** Patients having 1 of 60 possible Respiratory type primary impressions.

# **MAJOR TRAUMA**

	Total	Average Scene Time	Scene Time <= 10 minutes	RAPS Improvement
AMR National Average June 2013	2,422	20.02	25%	26%
NH April 2013	3	16.67	0%	0%
NH May 2013	16	19.94	0%	22.22%
NH June 2013	7	16.86	0%	50.0%

## Comments

The primary opportunity for improvement here is to decrease the time spent on scene with the patient. Ideally trauma patients should be removed from the scene and transport started within 10 minutes of arrival on scene. Plan of action includes meeting with crews in order to evaluate where opportunities exist to save time and disseminate this information and develop a best practice.

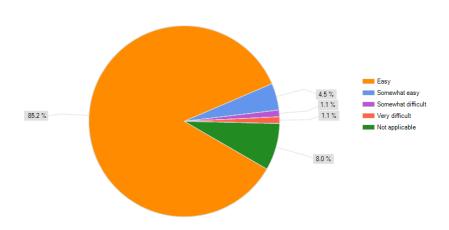
## **Definitions**

**Inclusion Criteria:** Patients with one or more of the following, Major Trauma = True, Trauma Activation = True, Primary Impression = Traumatic Arrest, Trauma Criteria Documented

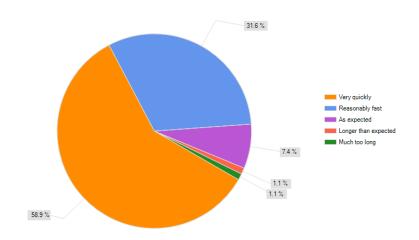
RAPS Improvement: Percentage of Patients with a RAPS Score > 0, which had an improvement.

# PATIENT SATISFACTION

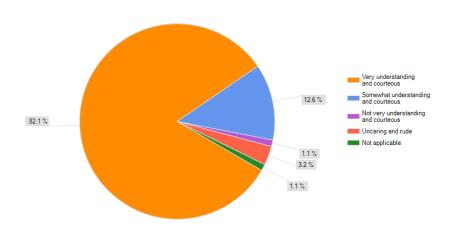
Please rate how easy it was to contact the ambulance when you called for service.



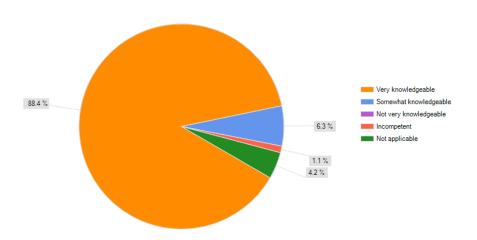
#### Please rate how quickly the ambulance responded.



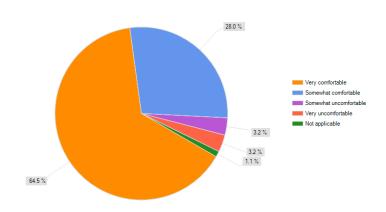
## Were the medics understanding and courteous?



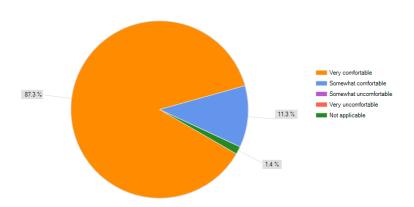
## Please rate the competency of our medics:



#### Please comment on the ride to the hospital:



# Did the medics make sure you were comfortable at the hospital before leaving?



## Comments

**Period**: August 1, 2012- July 31, 2013 n=102

Patient satisfaction remains high. The current Patient Satisfaction Survey tool is currently under review, the new form is being designed to maximize responses and provide greater detail into the patient's expirance.